

An Essay

on

*Pthysis Pulmonalis*

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W. E. H.

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## Pthisis Pulmonalis

Under this term, which signifies merely emaciation or wasting, have been included diseases essentially differing from each other, as well in their anatomical characters as in their mode of treatment. By Pthisis pulmonalis, or as it is more correctly called tubercular consumption, we now understand a disease differing in its real nature from all other pulmonary affections; - a disease originating in the formation of foreign bodies in the cellular membrane of the lungs, called tubercles.

According to Laennec these bodies, when first discoverable in the lungs, are seen in the form of semitransparent grains, greyish or colourless, and varying in size from that of a millet



to that of a hemp seed." These he calls "miliary tubercles". In the progress of the disease these boils gradually increase in size and become a pustule. A yellow spot is seen in the centre, which gradually proceeds towards the circumference and finally extends throughout the whole mass. In this stage which he calls the "crucis or immature", they have a consistence about equal to that of firm cheese. These tubercles after an indefinite period of time, gradually soften and finally liquify. This process, like that of the discoloration, commences at the centre and gradually proceeds to the circumference.

The softening of these sores produces two kinds of matter, differing considerably in their



appearance, the one, in colour and consistence, resembling thick mucus, and the other a thin fluid, colourless or tinged with blood, having a portion of soft tuberculous matter floating in it. This latter has a striking resemblance to common whey containing portions of curd.

The matter thus formed gradually makes its way into some of the ramifications of the bronchia and is discharged by expectoration. As these bodies are usually developed in considerable numbers in the same portions of the lungs, they frequently unite forming one continuous mass, which sometimes extends from one extremity of the lung to the other. These extensive col-



lections when softened are rapidly discharged, the matter being coughed up by mouthfuls. These discharges constitute what are called *conicæ*. After a rush of matter of this description the discharge gradually diminishes, and either finally ceases, or continues in form of a chronic catarach.

After these conicæ have emptied themselves of their contents they become lined with a soft white membrane. This remedial process of nature relieves the patient from most of his distressing symptoms, a chronic catarach only remaining. The expectoration which remains in these cases, Laennec supposes is secreted in part by this new-formed membrane, but more abundantly by the living membrane of the bronchia;



irritated by the passage of the tuberculous matter.

If no more tubercles are developed and the disease remain long stationary, a cartilaginous lining is formed under the above described membrane, and seems continuous with the lining membrane of the bronchial tubes. The sides of these excavations occasionally adhere and finally cicatrize, and in these cases, if there exist no more of these bodies in the substance of the lungs, the patient is eventually cured.

The development of tubercles is not confined to the lungs alone, but occurs simultaneously in other parts of the body. Particularly the coats of the intestines, and to this cause has been ascribed the diarrhoea which accompanie-



certain stages of the disease.

Tuberculosis phthisis is now universally conceded to be a disease inseparably connected with a hereditary transmission, "the seeds of which are complicated with the elements of the *animus vita*." Yet although its origin is connected with that of man's existence, it may lay dormant for a great length of time, even during the period of the longest life. This opinion seems to be underlaid by the fact that the disease very rarely occurs in mild and equable climates. For we cannot but observe the inhabitants of such countries as some people (especially those who have in turn adopted reforms, although no description of

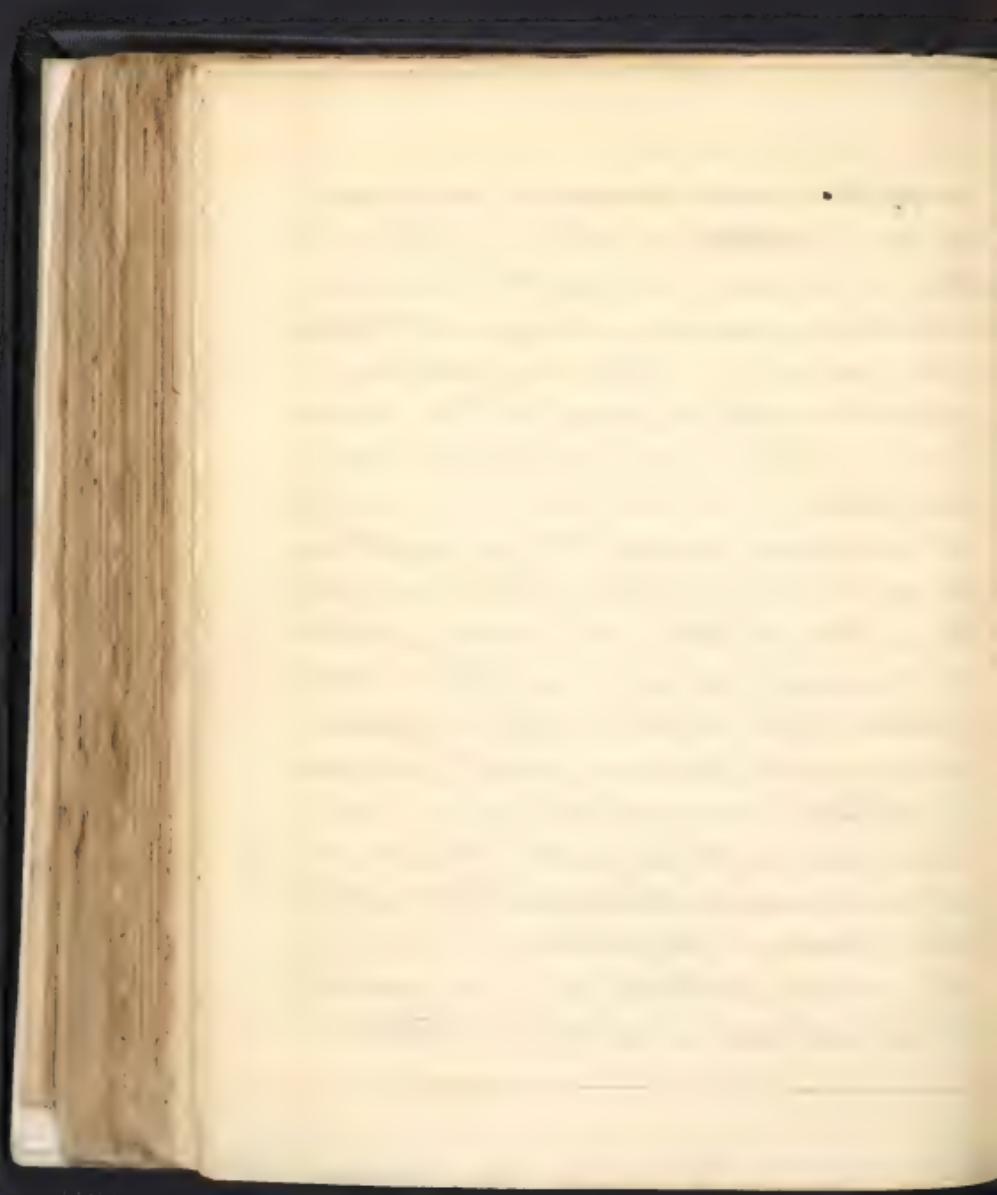


persons are exempt from this disease,  
yet there ~~is~~ certain conformation  
which seems to predispose to it, or rather to point out that predisposition.  
Hence it is generally found associated  
with a narrow chest, long neck, light hair,  
fair skin, blue eyes, florid complexion,  
great sensibility, and considerable  
acuteouch of mind. It also frequently  
occurs in several members of  
the same family.

Among the sympathies existing  
between the various organs of the  
body, none perhaps is more strange  
and marvellous than that between the skin  
and lungs. So intimate is this con-  
sent of parts, that whatever is done  
inhalation is made upon the former,  
in a greater or less degree exerts its  
influence upon the latter. Hence

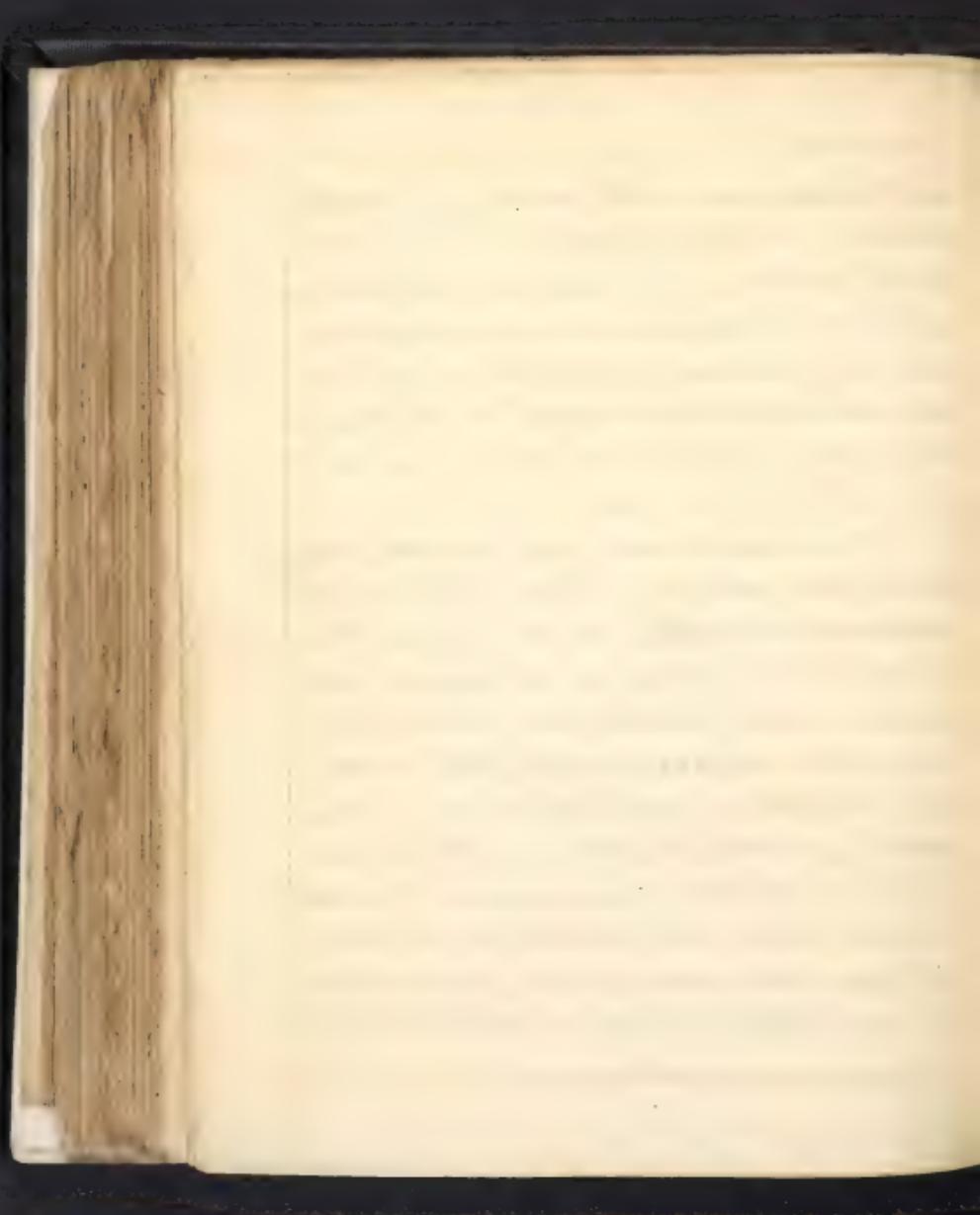


among the most frequent exciting causes of phthisis, are those which exert their influence through the medium of the skin: as sudden changes of temperature, exposure to cold and moisture, irregularities in respiration. The seat of pain in the last are not always in the skin. It also seems occasionally to be excited by irritating substances inhaled into the lungs: hence miners, stone cutters, and asbesti, render it a peculiarity of the disease. Diseases of the neighbouring organs frequently become exciting causes of phthisis: as enlargement or invagination of the liver or spleen, dilatations of the mesenteric gland, affections of the stomach in tertians &c. Of these may be added the inspiration of unwholesome



discharges: as in the healing of old ulcers the an suppition or excretion of the catarrhus, the cure of hemorrhoidal discharges &c. &c. Finally, whatever mainly excites or depresses the system: as of air in eating or drinking, inordinate exercise, excessive memory &c &c.

"It appears to me," says Dr. Johnstone, "that the first change which indicate the approach of phthisis are to be found in the skin. The colour of the cheek is always becoming paler and more delicate than before, while that of the lips is often of a brighter red. By looking steadfastly on the face of the patient for some time the colour will be observed to come and go in a surprising manner. A beautiful bloom will be spread



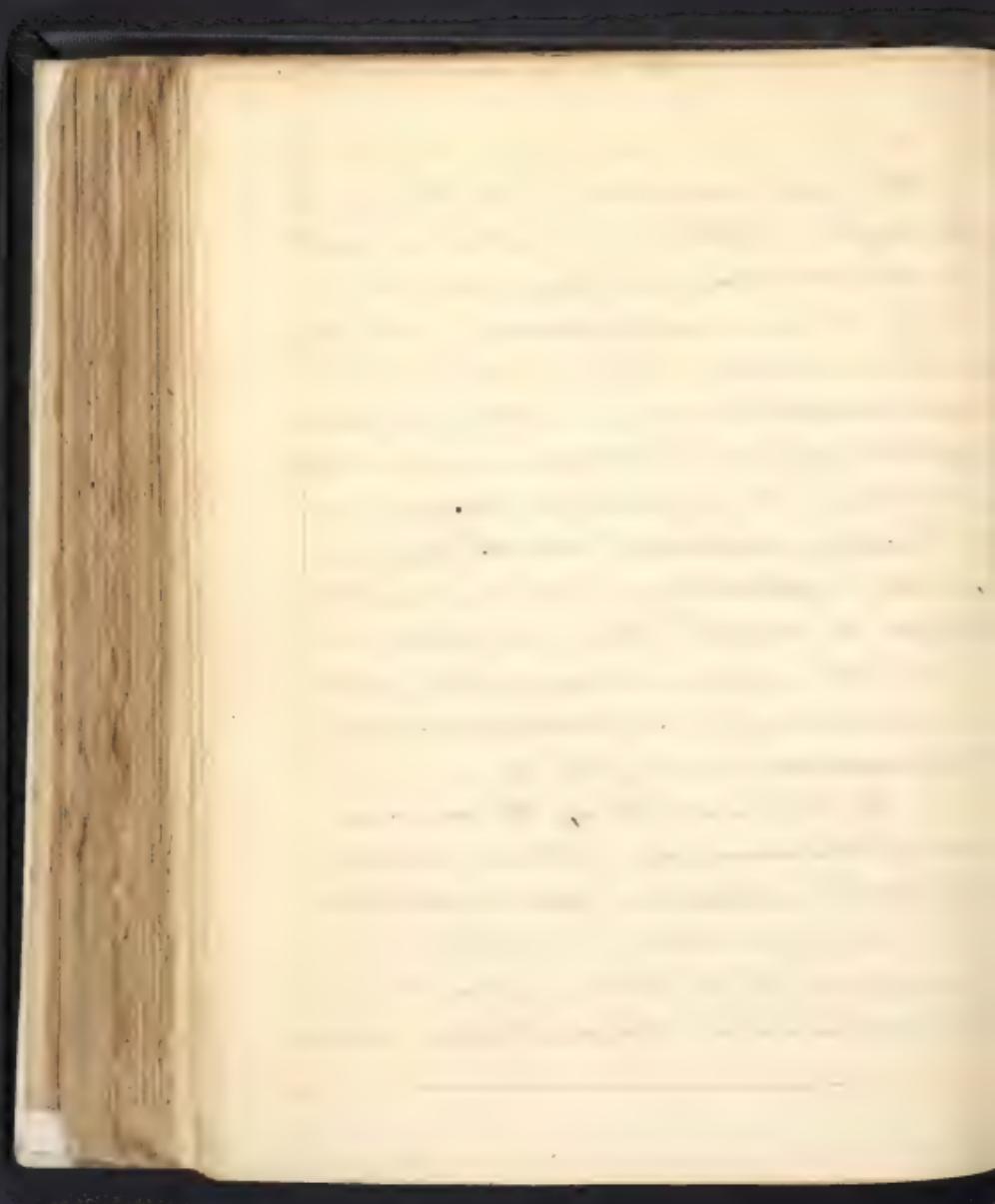
for a moment over some part of the cheeks and then receding will leave a remarkable pallor, almost approaching to whiteness!"

It is evident that the above symptoms will rarely be attended to. They will be unnoticed by the friends of the patient, and the practitioner will seldom be called in time to detect them. The first symptom which usually attracts attention is a slight hacking cough: this insensibly creeps upon the patient, and gradually becomes harsher and more fatiguing. Examined at this period, the pulse will be found accelerated especially after meals; the surface becomes pale, and the superficial veins distended and prominent. A sense of weight is felt in the chest, and the respiration becomes hurried.



by the least exertion. at this period  
the cough is either dry, or attended with  
the expectoration of a transparent or  
frothy mucus interspersed with grey  
or black specks. The hair assumes a  
curl appearance and becomes uncom-  
fortable, refusing to remain in a knot  
position. The conjunctiva becomes of  
a nearly whitened, and the eye of-  
assumes a sparkling appearance. The  
tongue is redder than natural; the  
heat of the surface is irregular, and  
even some degree of perspiration may  
be perceived during sleep.

In the progress of the disease  
most of the above symptoms become  
aggravated. A pain is felt in the tho-  
rax which is aggravated by inspiration par-  
ticularly in the horizontal posture; the pulse  
becomes quicker and harder; the fever increas-



ses with evening exacerbations and finally assumes the fine hectic type. The cough and difficulty of breathing grow worse, and the soles of the feet and palms of the hands become affected with burning heat.

The expectoration which has previously consisted of a transparent viscid mucus is now either suddenly or gradually changed to a matter resembling thin pus, opaque, of a pale yellow or greenish colour, somewhat tenacious, often containing portions of tuberculous matter, and occasionally streaked with blood.

This change in the character of the expectoration evidently depends on the existing and discharge of tubercles. If they be so numerous as to fill up a considerable portion of lung, the sputum will be darkly, and rankly,



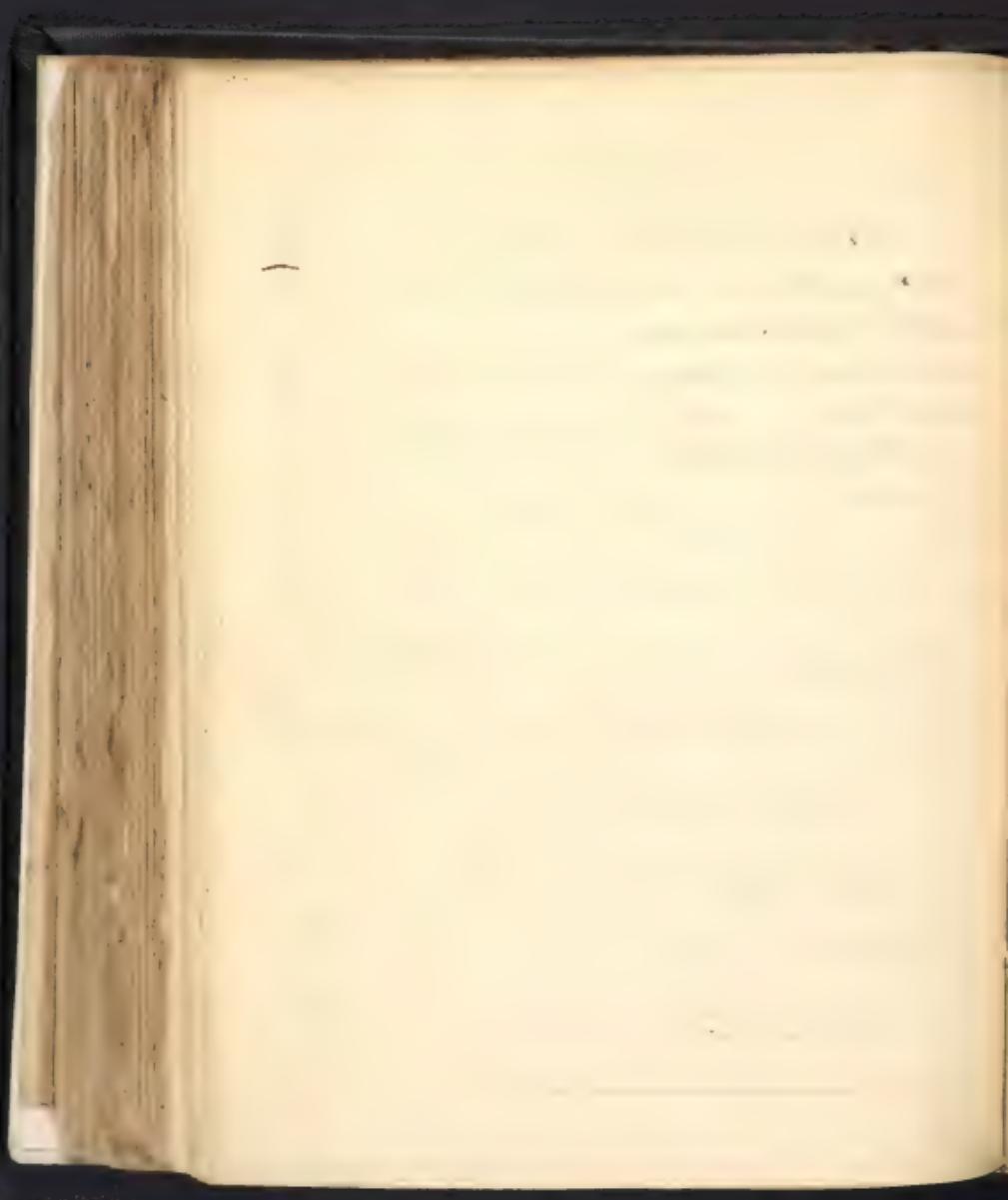
will endue in a short time. But if they are of small extent and few in number, and if at the same time his constitution is in an immature state, the inflammation will gradually diminish & finally cease altogether and a cure is effected. More commonly, however, the rectum is an ex terminator; a second growth is these extraneous bodies undergoes the same change marked by the same symptoms until, finally, the intestine is so far destroyed that the patient must necessarily sink. The disease gives forth putrefaction and corruption of these bodies, give to the disease its mortifying character.

"When it lies in regularly controllable parts," says Dr. Johnson, "it forms one of the most disgusting pictures which the human frame can exhibit in its progress & corruption. The



hectic, blush on the cheek; the vermilion lips, the burning heat in the palms of the hands and soles of the feet, with evening fever, are periodically changed for cold, colligative sweat, hollow voice,改変 countenance, sharpening features, augmented exhalation, and progressive con-  
ciation. Such is the series of heat-  
rending symptoms, which are said to be re-  
lated to the agonize, friend, whose mi-  
nus is kept alive by the never-dying hope  
which perpetually springs in the hectic breast.  
Whether it is that the delicate organization  
which predisposes to this destructive mis-  
sue, contributes to a inability of tem-  
per and sweetnes of disposition; I doubt-  
not; but certain it is that the malady  
in question, falls, in general on the best,  
as well as the poorest of creation."

In ascertaining the true charac-



ter of pulmonary diseases no means of investigation yet known seems to me fairer to assume truly usefull than the cylinder of Dr. Jacquier. But unfortunately it seldom affords any aid in the detection of tubercles until it is beyond the reach of medicine. When the tubercles are congegated in one spot, says he, "so as to form a considerable knot, the respiration is impeded in the part and perception will be dull and faint. This however, he remarks, must be considered as a very rare case. But when the second stage of the coagulation arrives, it occursce he had to the stethoscope insufficient pectoral insinuation will be perceived. This will easily become more evidently and sometimes even at the end of a few days will be complete. This sign he thinks should be considered as the pathognomonic of



thesis.

As it is her habit, impulsive and the impulsive of this disease once established, it becomes an object of the most moment to prevent. His indisposition from being clear, & - into action. To effect this end, the most judicious course is, doubtless, to send the patient to a warm climate. And this should be done in every case where the circumstances of the patient are such as to warrant it.

But the condition of a great majority of persons affected with this complaint, excludes them from the advantages of such a measure. In such cases, it becomes the duty of the practitioner to use every judicious means to arrest the disease, or to conduct it to a reasonable issue.



In the treatment of consumption  
venesection was formerly practiced to  
a very considerable extent. But since  
the disease's action has been ascertained  
to differ essentially from the pro-  
cess of ordinary inflammation, this prac-  
tice has been in a great measure  
abandoned. It has done immediate  
action, particularly in the incipi-  
ent stage of the disease, bleeding and espe-  
cially the local extraction of痰  
from the chest, is often highly usefull,  
and sometimes inexpressible.

Hot cloths should be employed  
so as to keep the bowels in a sudore  
state, and prevent irritation from  
the accumulation of mucus and  
water. Active purging, however, should  
be avoided, as it has a tendency to  
weaken the action of the skin. Sulphur

would no doubt improve in this case, from its known action on the skin. It is said that Dr. Whistler has obtained the most satisfactory results from the use of sulphur in this disease even when given in such minute doses as to produce no sensible effects.

In the commencement the diet should be light and easy of digestion. The best articles are, perhaps, the different kinds of fruitaceous, milk, and light animal broths. The orange milk has been prepared by numerous practitioners.

Exciters have usually been given in the commencement of this disease, principally with a view of determining to the surgeon. They do not act locally in this way, but would not affect equally solitary and certainly less unpleasant to

the patient) be obtained from small and  
frequent & repeated doses of tart tart or Iodo-  
camphor. To the same end particular  
attention should be paid to the dress of  
the patient. This should be regulated  
so as to protect him from the influ-  
ence of sudden changes of temperature,  
and to keep up a gentle action on the  
surface. To this purpose he should wear  
flannel next the skin, especially dur-  
ing the winter season. This should  
be frequently changed, and the next  
should be kept very dry & warm. The  
patient should use moderate exer-  
cise in frosty weather, should retire to  
bed and rise early, and all excesses  
should be carefully avoided.

As a remedy, perhaps, has been more  
universally resorted to in this disease  
than local irritation on the surface.



For this purpose various means have been resorted to as blisters, setons, fumigations, incisions, &c. &c. These measures have been employed not only in the forming stage but during the whole progress of the disease. Some very remarkable cures are recorded by Barron & Grey effected under circumstances inherently unsuited, through the agency of the moxa. When blisters are applied to the chest, they are usually made small and often re-heated, a light discharging by some stimulating ointment.

This mode of irritation Dr. Armstrong thinks preferable to a perpetual seton or pipe. He supposes their good effects arise, more from the irritation produced than from the discharge.

These are the remedies usually employed in the early stage of blisters.



In the more advanced stages the aperient measures must be laid aside, and even some air must be lent to the subject of the system. The extreme debility, the colligative diarrhoea, and the profuse nocturnal perspirations all call for immediate attention. A more lenient diet must be allowed, and occasionally fermented liquors or wine will be found advantageous. Skimmed Shanty will be given to check the profuse alvine discharges and quiet irritation; and opium in combination with sanguinaria will be found useful in checking perspiration.

Innumerable articles have at different times been highly extolled, and even set up as specifics in the cure of consumption. Which, however,



in a more deliberate investigation,  
have been found no farther useful  
than as general remedies; and as yet  
we know of no specific. Digitalis may  
be mentioned as an instance of this  
kind; and notwithstanding the praises  
which were lavished upon it at one  
time, it has almost fallen into disuse.  
Yet digitalis from its known powers  
in calming irritation, and reducing  
the action of the heart and arteries,  
may no doubt be advantageously  
employed in the early stage of this disease.

The prupic acid has been re-  
commended pretty much with the  
same view. Its powers in allaying  
pain and tranquillizing the system  
are no doubt very considerable: but  
being a most virulent poison, and a  
very hazardous remedy, even when



given with the greatest caution, its employment has been very limited in this country.

"Prupic acid and the vapour of tar" says Dr. Johnson "have evaporated into air thin air! yet notwithstanding this evaporation, the inhalation of the vapour of tar has proved beneficial in many cases.

Dr. Johnson, from observing the benefits resulting to althioical persons from the accidental occurrence of a hemorrhoidal discharge, suggests the propriety of an attempt to establish it artificially, by leeches applied to the verge of the anus and the use of aloeatic purges.

